

LDWSF
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02/05/87

MARINE POWER AND EQUIPMENT
TECHNICAL STATUS REPORT



There were three facets to the Marine Power and Equipment study, namely: Bioassay of sediments, Metals analysis, and a dive survey to determine the quantity of sandblasting debris present at the Marine Power facilities.

Sampling for Chemical Analysis

The sampling areas selected in figures 1 and 2 were chosen because of their proximity to areas where sandblasting debris was found on a previous survey.

Composite samples were collected at each of the areas with a VanVeen grab sampler. Three grab samples were collected from an area and mixed in a pre-cleaned stainless steel bucket until the sediment was homogenous. This required 5 to 6 minutes of constant stirring. The homogenized sample was then split three ways: A 1-gallon aliquot for bioassays, an 8 ounce container for metals analysis and an 8 ounce container for organotin analysis in the future. The samples remained refrigerated in ice chests and in the custody of EPA personnel until they were delivered to the EPA laboratory in Manchester, Wa.

The analytical results for metals analysis are contained in appendix A.

Bioassay results are contained in appendix B.

Diving Operations

The objective of the dive survey was to find the thickness and areal extent of the deposits of sandblasting debris on the bottom of Lake Union and the Duwamish River.

Method

A 100-meter line, which was marked in 5-meter increments, was laid on the bottom of the lake for divers to follow. Divers dug holes into the lake bottom with a trowel at the 5 or 10 meter intervals along the line and measured the thickness of sandblasting debris using a folding carpenter's rule. The measurements and other notes were recorded as divers progressed along the line. After each dive the line was moved to a new location and the process repeated. The Lake Union site was the only site surveyed because of a lack of divers available to do the job.

The results are presented in Appendix C and figure 1.

MARINE POWER & EQUIPMENT COMPANY

1441 North Northlake Way, Seattle, Washington

February 5, 1987

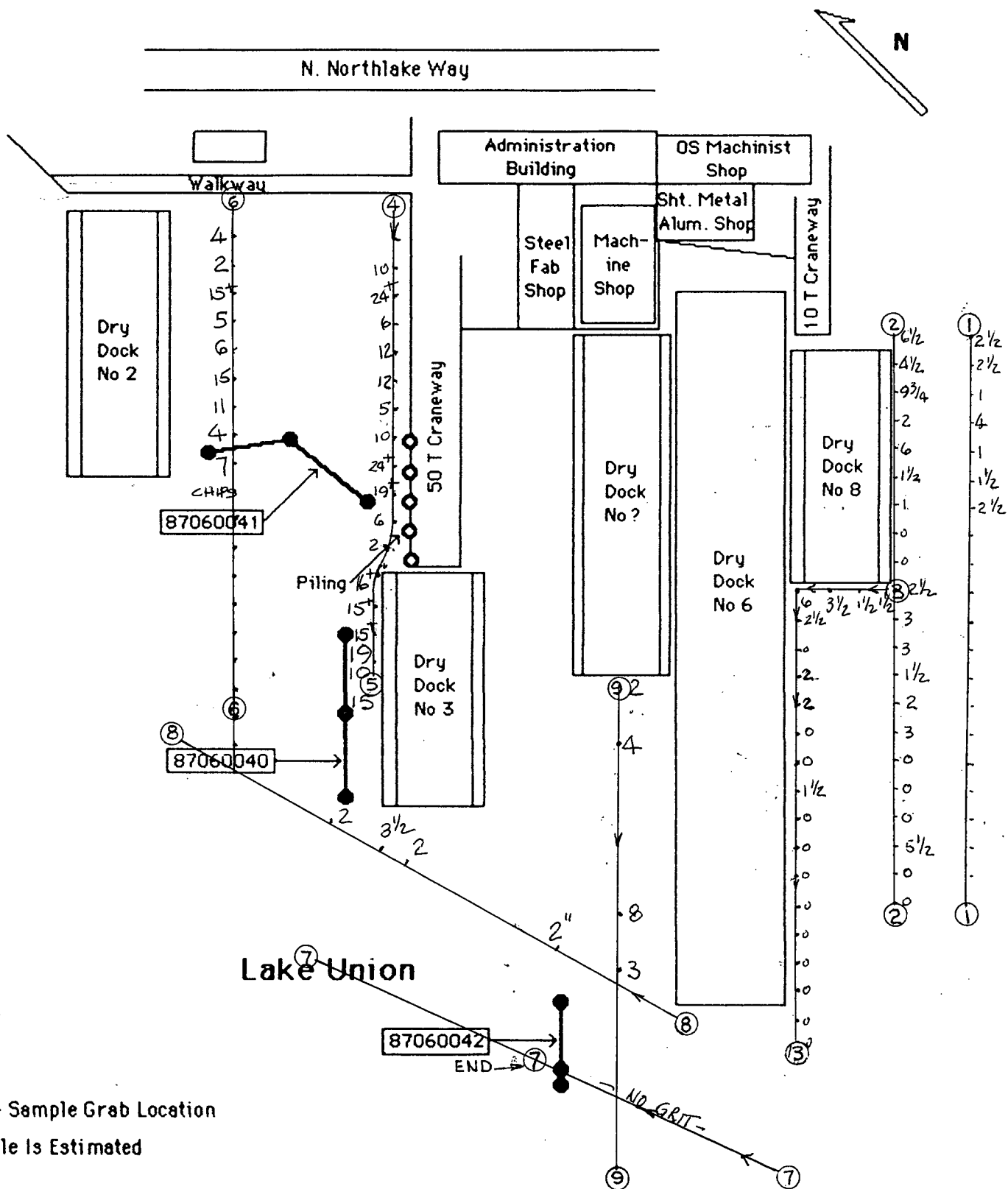


FIGURE 1

MARINE POWER & EQUIPMENT COMPANY

6701 Fox Ave. S., Seattle, Washington

February 6, 1987

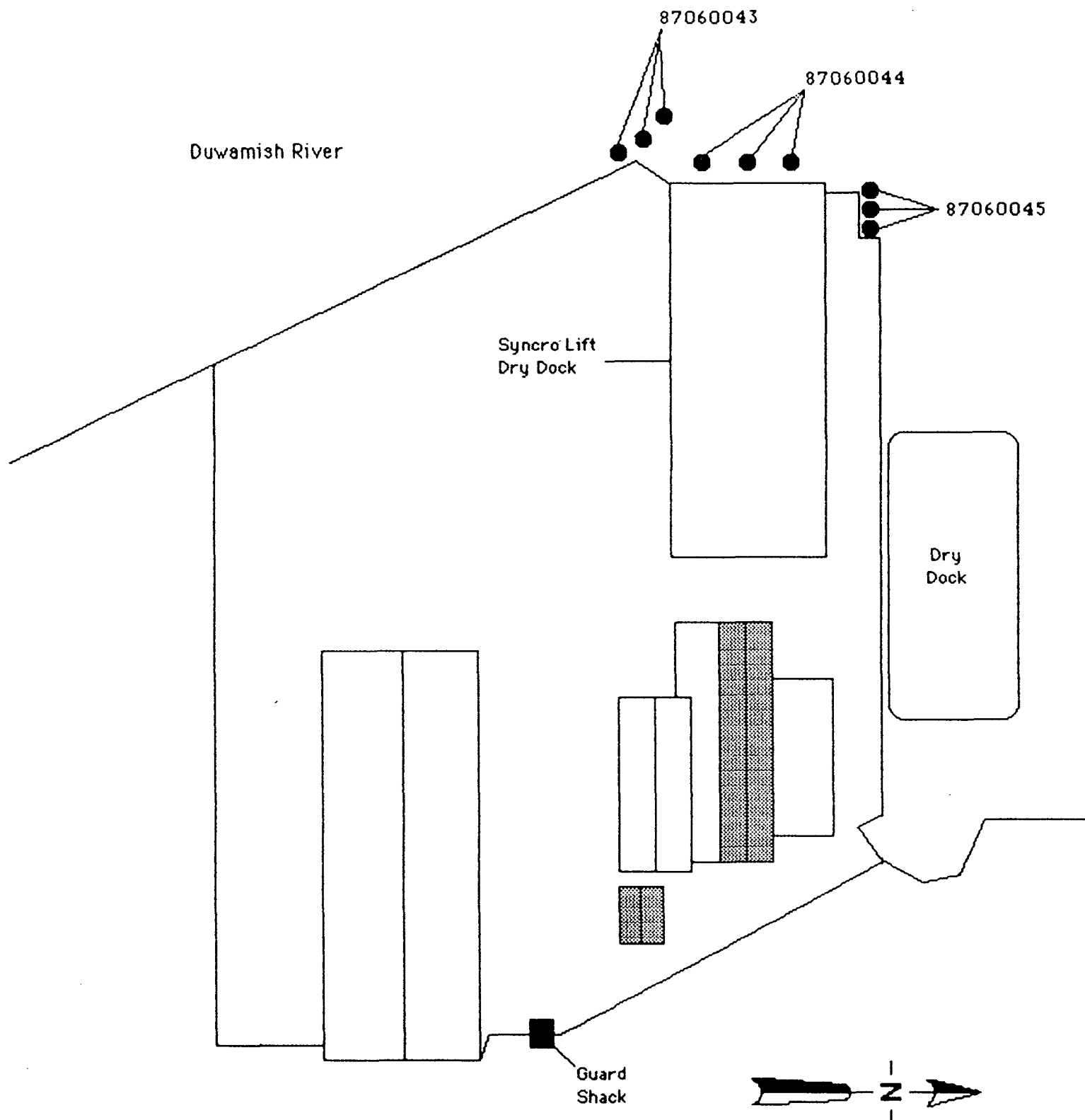


FIGURE 2

APPENDIX A

METALS

APPENDIX B

BIOASSAY RESULTS

APPENDIX C

BOTTOM MEASUREMENTS

LINE 1

DISTANCE ON LINE (METERS)	DEPTH OR THICKNESS OF DEPOSIT (INCHES)
0	2 1/2 - some metal debris
5	2 1/2 - various debris
10	1
15	4
20	1
25	1 1/2
30	0
35	"
40	"
45	"
50	"
55	"
60	"
65	"
70	"
75	"
80	"
85	"
90	"
95	"
100	"

LINE 2

DISTANCE ON LINE (METERS)	DEPTH OR THICKNESS OF DEPOSIT (INCHES)	
0	6 1/2 - metal debris	
5	4 1/2	
10	9 3/4	
15	2	
20	6	
25	1 1/2	
30	1	
35	0	
40	0	
45	2 1/2	
50	3	
55	3	Gray powdery subsurface 2" thick and 1" below sediment surface between 60 to 80- foot distance mark.
60	1 1/2	
65	2	
70	3	
75	0	
80	0	
85	0	
90	5 1/2	
95	0	
100	0	

LINE 3

DISTANCE ON LINE (METERS)	DEPTH OR THICKNESS OF DEPOSIT (INCHES)
0	1 1/2
5	1 1/2
10	3 1/2
15	6
20	2 1/2
25	0
30	2
35	2
40	0
45	0
50	1 1/2
55	0
60	0 Pilings
65	0
70	0
75	0
80	0
85	0
90	0
95	0
100	0

LINE 4 & 5

DISTANCE ON LINE (METERS)	DEPTH OR THICKNESS OF DEPOSIT (INCHES)
0	
5	lost in poor visibility
10	15
15	10
20	19
25	15
30	15+
35	16+
40	2
45	6
50	19+
55	24 +
60	10
65	5 hard surface
70	12
75	12 with light sand mix below
80	6 with light sand mix below deposit
85	24 +
90	10 +
95	rocks, sand and gravel.
100	rocks & gravel assorted (line 4 starts here - this is the shoreward end of the line)

LINE 6

DISTANCE ON LINE (METERS)	DEPTH OR THICKNESS OF DEPOSIT (INCHES)
0	Gravel mix with sandblasting debris
5	
10	4 over wood chips
15	
20	2 over clay
25	
30	15+
35	
40	5
45	
50	6
55	
60	15
65	
70	11 deep - 2 crusts of sandblasting debris
75	
80	4 crust
85	
90	7 crust
95	
100	no grit - paint chips in clay and native sediment

LINE 7

DISTANCE ON LINE (METERS)

DEPTH OR THICKNESS OF DEPOSIT (INCHES)

0

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75

80

85

90

95

100

LINE 8

DISTANCE ON LINE (METERS)	DEPTH OR THICKNESS OF DEPOSIT (INCHES)
0	0
5	0
10	0
15	0
20	0
25	2
30	0
35	0
40	0
45	0
50	0
55	2
60	3 1/2
65	0
70	2
75	0
80	0
85	0
90	0
95	0
100	0

LINE 9

DISTANCE ON LINE (METERS)	DEPTH OR THICKNESS OF DEPOSIT (INCHES)
0	2
5	0
10	4
15	0
20	0
25	0
30	0
35	0
40	8
45	0
50	3
55	0
60	0
65	0
70	0
75	0
80	0
85	0
90	0
95	0
100	0